

ABSTRACT OF THE DISCLOSURE

A high-speed, low-noise charge pump for use in a phase-locked loop. The charge pump is constituted by first and second cascode current mirrors, as well as first and second
5 switching transistors. The first cascode current mirror includes a first output mirror transistor and a first output cascode transistor. The first switching transistor is interposed between the first output mirror and the first output cascode transistors. During assertion of a first
10 control signal, the first switching transistor is turned on so a first mirror current can flow through an output node. Likewise, the second cascode current mirror includes a second output mirror transistor and a second output cascode transistor. The second switching transistor is interposed
15 between the second output mirror and the second output cascode transistors. During assertion of a second control signal, the second switching transistor is turned on so the second mirror current can flow through the output node.